APPLE WRITER™
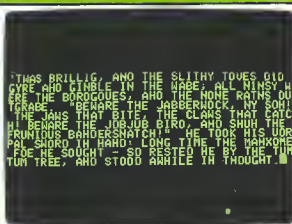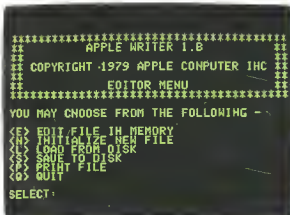## TEXT EDITING SYSTEM

It was brilling, and the slit
Did gyre and gamble in the wabe,
—All mimsy were the borogove,
And the mome wreaths outgave.
"Beware! the Jabberwork, my son,
The jaws the bite, the claws that cat
Beware the Jubjeb bird,
and shun the frumious Bandersnitch!"
He took his vorpal sword in hand:
Long time that manxiome foe he sought,

'TWAS BRILL
DID GYRE AND G
ALL NIMSY WERE T
AND THE MOME RATH

"BEWARE THE JABBERW
THE JAWS THAT BITE,
BEWARE THE JUBJUB BIRD
THE FRUMIOUS BANDERSHA

HE TOOK HIS VORPAL SWORD I
LONG TIME THE MANXOME FOE HE
SO RESTED HE BY THE TUMTUM TREE
AND STOOD AWHILE IN THOUGHT

```
***************************************
**         APPLE WRITER 1.B          **
**  COPYRIGHT -1979 APPLE COMPUTER IHC **
**            EDITOR MENU             **
***************************************
YOU MAY CHOOSE FROM THE FOLLOWING -

<E> EDIT FILE IN MEMORY
<N> INITIALIZE NEW FILE
<L> LOAD FROM DISK
<S> SAVE TO DISK
<P> PRINT FILE
<Q> QUIT

SELECT:
```

'was brillig, and the slithy toves
d gyre and gimble in the wabe;
nimsy were the borogoves,
he mome raths outgrabe.

he Jabberwock, my son!
hat bite, the claws that
Jubjub bird, and shun
s Banderspatch!"

Jabberwock,
has bite, the
e Jubjub bird
umious Banders
ok his vorpal swor
time the manxom
ed he by the Tu
stood awhile in t

'TWAS BRILLIG, AND THE SLITHY TOVES DID
GYRE AND GIMBLE IN THE WABE; ALL NIMSY
ERE THE BOROGOUES, AND THE MOME RATHS OU
GRABE   "BEWARE THE JABBERWOCK, MY SON!
THE JAWS THAT BITE, THE CLAWS THAT CATC
H! BEWARE THE JUBJUB BIRD, AND SHUN THE
FRUMIOUS BANDERSNATCH!"   HE TOOK HIS VOR
PAL SWORD IN HAND: LONG TIME THE MANXOME
FOE HE SOUGHT   SO RESTED HE BY THE TUM
TUM TREE, AND STOOD AWHILE IN THOUGHT

NOTICE

Apple Computer Inc. reserves the right to make improvements in this manual at any time and without notice.

DISCLAIMER OF ALL WARRANTIES AND LIABILITY

APPLE COMPUTER INC. MAKES NO WARRANTIES, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS MANUAL OR WITH RESPECT TO THE SOFTWARE DESCRIBED IN THIS MANUAL, ITS QUALITY, PERFORMANCE, MERCHANTABILITY, OR FITNESS FOR ANY PARTICULAR PURPOSE. APPLE COMPUTER INC. SOFTWARE IS SOLD OR LICENSED "AS IS". THE ENTIRE RISK AS TO ITS QUALITY AND PERFORMANCE IS WITH THE BUYER. SHOULD THE PROGRAMS PROVE DEFECTIVE FOLLOWING THEIR PURCHASE, THE BUYER (AND NOT APPLE COMPUTER INC., ITS DISTRIBUTOR, OR ITS RETAILER) ASSUMES THE ENTIRE COST OF ALL NECESSARY SERVICING, REPAIR, OR CORRECTION AND ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY DEFECT IN THE SOFTWARE, EVEN IF APPLE COMPUTER INC. HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF IMPLIED WARRANTIES OR LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

©1979 by APPLE COMPUTER INC.
10260 Bandley Drive
Cupertino, California 95014
(408) 996-1010

Software developed by Apple Computer Inc. in conjunction with Paul Lutus

APPLE Part Number #030-0082

APPLE WRITER™
TEXT EDITING SYSTEM

TABLE OF CONTENTS

INTRODUCTION

CHAPTER 1
GETTING STARTED

CHAPTER 2
TEXT EDITING

CHAPTER 3
PRINTING

APPENDICES

INDEX

INTRODUCTION

This manual has two primary functions. The first is to teach you how to use the Apple Writer: the manual uses examples to illustrate how to use the editing and printing commands. The second function of the manual is to serve as a reference guide to the Apple Writer. The Appendices, Reference Card, and the Index serve this function.

The Apple Writer is a series of programs on a diskette. It gives your Apple II the ability to edit memos, letters, or even a novel on the screen. Chapter 1 of this manual explains how to start using the Apple Writer. It describes the editor program, the equipment you need to use the Apple Writer, and how to run a tutorial that helps you learn some editing commands. Chapter 2 describes the editing commands: how to enter text, delete mistakes, move blocks of text, save and insert segments from a diskette, and search through the text to replace letters, words, or phrases automatically. Chapter 3 tells how to use the Apple Writer with a printer, so you can print your edited material on paper, letter perfect every time.

To use the Apple Writer, you need an Apple II or Apple II Plus with 48K of memory and at least one disk drive. This manual assumes that you know how to use the Apple II and its disk drive and that you've set up the Apple II correctly.

A final note -- we wrote this manual using the Apple Writer.

CHAPTER 1
GETTING STARTED

THE EDITOR PROGRAM

The editor program is the first major program of the Apple Writer. You
may use the editor program to write and revise documents, which can then
be printed on paper. The editor program puts the Apple into modes in
which you can insert and delete text, move the cursor through the text
without changing it, enter text in both upper and lower case, and change
characters from upper to lower case or vice versa. The editor program
also contains control commands that ease the process of creating and
revising a document. Finally, the editor program gives you access to
the Apple Writer's print program, which allows you to produce a copy of
your document on paper, as described in Chapter 3.

WHAT YOU NEED

To use the editor program, you need the diskette containing the Apple
Writer, an Apple II or Apple II Plus with 48K of memory, a video
monitor, and at least one disk drive.

For reference, you should have on hand a copy of the DOS manual: Disk
Operating System Instructional and Reference Manual (Apple Product
#A2L0012), and either the Apple II: BASIC Programming Manual (Apple
Product #A2L0005X), if you have Apple BASIC, or Applesoft II: BASIC
Programming Reference Manual (Apple Product #A2L0006), if you have
Applesoft.

To use the printer program to print a document, you need these
additional items:

* diskettes containing the files you want to print (if the files aren't
on the diskette containing the Apple Writer)

* a printer and a supply of paper and ribbons for it

* a printer controller card appropriate for your printer, which may be
either
    a Centronics printer interface card (Apple Product #A2B0007),
    a parallel interface card (Apple Product #A2B0002), or
    a high-speed serial interface card (Apple Product #A2B0005), with a
    P8-02 PROM for letter-quality printers.

2

For reference, you should have a copy of the manuals for the printer and the printer controller card. Depending on which card you use, refer to the Centronics or Parallel Printer Interface Card: Installation and Operating Manual (Apple Product A2L0004), or the Serial Interface Card: Installation and Operating Manual (Apple Product A2L0008).

For additional suggestions, look at Appendix B under Printing Problems, and also see Appendix E for a discussion of certain printers and interface cards.

POINTERS AND ABBREVIATIONS

Whenever you see this device:

read carefully. We're offering a helping hand with some picky detail. For example,

Remember to press RETURN after you type a command to the Apple Writer.

This manual uses abbreviations to represent names of three keys. They are the same as the abbbreviations shown on the Apple II keyboard: REPT for repeat, ESC for escape, and CTRL for control.

We use "CTRL-" followed by the letter you should press to indicate that you should hold down the CTRL key while pressing another key (e.g., CTRL-C).

Finally, when we talk about the picture on the monitor or TV connected to your Apple, we call the picture a "screen".

STARTING

The package for the Apple Writer includes two diskettes containing Apple Writer's programs and files. One of the diskettes is a "working copy" of the Apple Writer. Throughout the manual, almost every time we refer to the diskette containing the Apple Writer, we mean the working copy.

The other diskette is a "write-protected" copy of the Apple Writer. The write-protected diskette has no notch on its right edge and is labeled as the backup copy. Keep this copy of the diskette in a safe place (away from heat, magnets, and dust). If your working copy of the Apple Writer is destroyed, you can use the write-protected copy to make another working copy. If you have two disk drives, you can use the copy program described on pages 38-40 of the DOS manual. If you have one disk drive, you can make a working copy by following the procedure described in Appendix G of this manual.

Having put away your write-protected copy of the Apple Writer diskette, you're holding a working copy and are ready to go. Put the Apple Writer diskette in drive 1 of your system and turn on the Apple II. If you have only one drive, that is drive 1.

The diskette containing the Apple Writer should stay in drive 1. The Apple Writer can load and save text files using any of your disk drives, but it returns to drive 1 to run the editor and print programs.

On Apple II systems that have an Autostart ROM, the Apple Writer should begin running automatically. If the Apple Writer doesn't begin running, you'll see the old monitor prompt (*). Use the following steps to start the Apple Writer:

1. Press RESET.

2. Press 6 (or the number of the slot holding the disk controller in the Apple II), then press CTRL-P.

3. Press RETURN.

The disk should run for a while, then stop. After the disk stops, your Apple's screen should look like this
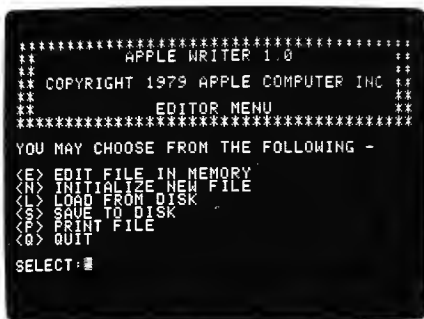
This is the "editor menu". Later, we'll talk about each item on the menu.

THE TUTORIAL

If you would like a short lesson on how to use the Apple Writer, you may use the "Tutorial". The Tutorial is one of Apple Writer's text files, which you can view on the screen. It leads you through the first steps of using the editor. The Tutorial assumes that you know how to put a diskette in the drive and turn on the Apple. The objective of the tutorial is to introduce you to a few of the features of the text editor and help you feel comfortable about using it.

HOW TO RUN THE TUTORIAL

1. From the editor menu, type
    L
then press the RETURN key.

2. Type
    TUTORIAL
then press the RETURN key. The disk drive's IN USE light will come on, and the drive will whirr for a while.

3. Type
    E
then press the RETURN key. Next, you'll see the text of the tutorial, which is also printed as Appendix C of this manual.

4. Follow the directions given in the first screen of the tutorial, and you're on your way.

If you don't want to use the tutorial, you'll find all you need to know about the Apple Writer in the rest of the manual.

CHAPTER 2
TEXT EDITING

Text editing with the Apple Writer starts at the editor menu. If you
didn't use the tutorial, you should still have the editor menu on the
screen. If you did use the tutorial, start the system again and get the
editor menu on the screen.

THE CURSOR

The white blinking rectangle at the end of the menu, after SELECT:, is
called the "cursor". It's like the bouncing ball of earlier days
(...now sing along by following the bouncing ball...) It leads you
through the text, indicating where you are, not only in the text you
type, but also in the various modes of the Apple Writer. For example,
it tells you if it is in text mode, entering lower case characters, or
upper case mode, entering upper case characters.

You can see what the mode is by looking at the cursor. Sometimes the
rectangle is blank, sometimes it has another character inside it (e.g.,
^,+,%).

STOPPING AND RESTARTING

The purpose of this section is to show you how to get in and out of text
files. Once you have delved into the mysteries of the Apple Writer and
are entering text, you may want to stop for a while (e.g., for eating,
sleeping, or buying more diskettes). Here is an example of stopping
after you have typed a text file.

The first thing to do is to set the scene for stopping. Before you can
stop you must start editing. Do this by getting the editor menu on the
screen. (If you have been following the examples in this manual, the
editor menu should be on the screen.) Type N in response to the menu.

The screen should look like this

```
*****************************************
**          APPLE WRITER 1.0           **
**                                     **
** COPYRIGHT 1979 APPLE COMPUTER INC   **
**                                     **
**            EDITOR MENU              **
*****************************************
YOU MAY CHOOSE FROM THE FOLLOWING -

<E> EDIT FILE IN MEMORY
<N> INITIALIZE NEW FILE
<L> LOAD FROM DISK
<S> SAVE TO DISK
<P> PRINT FILE
<Q> QUIT

SELECT:N
ERASE FILE IN MEMORY (Y/N)?█
```

Type Y to indicate that you want to clear the memory and start entering
text.

The Apple Writer erases the file in MEMORY when you ask it to load a new
file. However, it doesn't erase the version of the file saved on the
diskette.

At this point, you should be looking at a screen that is blank except
for the cursor in the upper lefthand corner. Now type
GOOD MORNING, CLASS.

OK, you've set the scene by selecting N from the editor menu and typing
a new text file.

Now, move on to stopping. Let's assume you have typed your entire text
and you want to get back to the menu. Press ESC ESC CTRL-Q
and the menu will appear on the screen. There, you've stopped.

To restart, look through the menu selections and decide what you want to
do next.

MENU SELECTIONS

As you look at the screen, you see the six options on the menu. Look at
all of them before selecting one. If you select the first option, (E)
EDIT FILE IN MEMORY, you may insert, delete, and modify the text in your
Apple's memory. (N) INITIALIZE NEW FILE clears the Apple's memory so
you can enter a new text file. You tried that option when you practiced
stopping, so you know it will ask you if you want to save the file in
memory.

(L) LOAD FROM DISK allows you to load a text file from the diskette into the Apple's memory. If you press L, the Apple Writer responds
ENTER FILE NAME:

or, if you've used the editor program without quitting, it remembers the name of the file you last loaded or saved and responds
USE "YOUR FILE'S NAME"
 AS FILE NAME (Y/N)?

This reminds you that you have a file in memory, which the Apple Writer will erase when it loads a new file from the diskette. This would be a good time to save on a diskette the current version of the file in memory. After saving your file, start the process of loading again. Press L in response to the menu, then N in response to the "use file name" question. The Apple Writer responds
ENTER FILE NAME:

If you enter the name of a nonexistent file or mistype the file name, the Apple Writer displays the message
FILE NOT FOUND
then, returns to the menu.

To back out of loading a file, press RETURN in response to
ENTER FILE NAME:

(S) SAVE TO DISK saves on a diskette the contents of the text file in memory.

(P) PRINT FILE starts the second half of the Apple Writer working -- printing your text on paper. Chapter 3 describes this process.

Finally, (Q) QUIT returns you to Apple Integer BASIC or Applesoft.

Now, try the first option. When you press E, your message,
GOOD MORNING, CLASS.
should appear on the screen. For the moment that's all the text you want, so return to the menu. Remember that you type ESC ESC CTRL-Q to return to the menu.

After you edit your text file, be sure to SAVE the edited version.

SAVING YOUR TEXT FILE

Look over the options on the menu. Press S to indicate that you want to
save your file on a diskette. If you have not named your file before,
the Apple Writer will respond with
ENTER FILE NAME:

At this point, you need to name your file. The maximum length of a file
name is 22 characters, including spaces. See the DOS manual for more
information on file names.

Choose and enter a name for the file you want to save. For example, if
you name your file, "Class", type
CLASS

Be sure to initialize diskettes before you save files on them. See the
DOS manual for instructions on initializing diskettes.

If you have saved your file before, and have used the editor program
without quitting, the Apple Writer responds
USE "FILE NAME"
AS FILE NAME (Y/N)?

Press Y to save the revised version under the same name.

This erases the old version of the file from the diskette.

If you want to save many versions, each of them must have a unique name.
For example, Letter, Letter1, Letter2, etc.

After the disk saves the file, the editor menu will appear on the
screen, indicating you need to select what you'll do next.

If you decide you don't want to save your file, you can press RETURN in
response to ENTER FILE NAME: and USE "FILE NAME" AS FILE NAME (Y/N)?.
This returns you to the point of selecting an option from the editor
menu.

To see which files are on a diskette or to erase files you no longer
want, use CTRL-D, which is described in Chapter 2.

If you want the file to be saved to a disk drive or controller slot
other than the one you're using for the Apple Writer diskette, include
this information after the file name, separating the items with commas.
For example, although you are writing and editing on disk 1, you might
want to save your file named CLASS on disk 2. So, to save your file on
disk 2, you would type
CLASS,D2
in response to ENTER FILE NAME:

If the second disk is plugged into a different controller slot (e.g.,
slot 7), type
CLASS,D2,S7
in response to ENTER FILE NAME:

After using a different slot number, you must specify the original slot
number (most often it's slot 6) when you are ready to print a file. If
you don't specify the original slot number, the Apple Writer will search
for the print program for a long time on the wrong slot.

One way to specify the slot number is to use CTRL-D and the Catalog
command. Get to the editor menu, then type
CTRL-D and press RETURN

Type
CATALOG,S6

(assuming 6 is the slot you used to boot the Apple Writer).

After the screen displays the catalog for slot 6, type
Q and press RETURN

This takes you back to the editor menu. For more on CTRL-D, see Chapter
2.

MODES

The Apple Writer operates in four modes. By looking at the cursor, you
can tell which mode the Apple Writer is using.

Cursor:	Mode:	To enter from text mode, press:	To exit, press:
☐	Text mode	(Default)	ESC (to get ^)
+	Cursor control mode	ESC ESC	space bar (to get ☐)
^	Upper case mode	ESC	ESC space bar (to get ☐)
%	Case change mode	ESC ESC CTRL-C	ESC (to get +)
			space bar (to get ☐)

"Default" indicates the condition that exists when you first start using
the Apple Writer. For example, the editor program always starts in text
mode, which is the default mode for the Apple Writer.

TEXT MODE

When you select E from the editor menu, you automatically get text mode. In this mode, you may enter and delete words; move letters, words, or lines around the screen (or the file); or review the contents of the file without changing them.

When you're entering text on the screen, the Apple Writer will wrap around when your text reaches the right edge of the screen, splitting your words anywhere the break occurs. This doesn't affect the final document -- the text looks very nice when it comes out of the printer (if you follow the directions in Chapter 3). For example, a line you type may look like this on the screen:

HERE IS A SAMPLE LINE TO SHOW WRAP AROU
ND AND HOW IT LOOKS.

and will print like this:

here is a sample line to show wrap around and how it looks.

In the Apple Writer, pressing the RETURN key tells the editor you are finished either with your message to the editor or with a paragraph of text. Don't press RETURN to mark the end of each line you see on the screen if you plan to print your text.   You should press RETURN:

* after you type characters in response to a request from the Apple Writer,

* to end a paragraph in a printed document, not to end a line on the screen, and

* before and after embedded print commands (see Chapter 3).

The cursor may be anywhere on the screen when you press RETURN.   You may want to use two RETURNs between paragraphs.

Now try typing some words.   When you fill the screen with your typing, the screen will scroll upwards so that the cursor is always visible. Try filling the screen with text.   If you need a source of inspiration, thumb through your Apple manuals.

CURSOR CONTROL MODE

In this mode, you may move the cursor around the screen without changing the text. To enter this mode, press ESC twice. After the first ESC, the cursor will change from blank to ^, showing you that the Apple Writer is in upper case mode. After the second ESC, the cursor will change from ^ to +, showing you that the Apple Writer is in cursor control mode. Now move the cursor around the screen, using the following keys:

Key: Moves cursor:
K   Right one character
J   Left one character
I   Up one line
M   Down one line

Look at the I, J, K, and M keys on the keyboard. They look like this:

Imagine four arrows drawn on them (or make little labels and stick them on the keys):

Simultaneously pressing one of these keys and the REPT key, you may move the cursor rapidly across a line of text and up and down the lines of text.

If you press some key other than CTRL-T, CTRL-V, I, J, K, or M, (or RESET), the cursor will revert to text mode (Cursors! Foiled again!), changing from + to blank. If you press RESET, you will return to the editor menu.

As you move the cursor by pressing I (or I and the REPT key), you will
notice that it zigzags its way through the text. It moves up about 40
characters at a time, unless it encounters a RETURN.

With the cursor in text mode, you may add to or modify your text. Try
the following example. Press RETURN a few times so you are starting
after a few blank lines. Type this line:

```
THE QUICK BROWN JUMPED OVER THE LAZY DOG
'S BACK.█
```

You want to insert the missing word "fox" in the this line. So, press
ESC twice. The cursor will now be +. Press I to move the cursor up a
line. The screen should look like this

```
THE QUIC█K BROWN JUMPED OVER THE LAZY DO
G'S BACK.
```

Move the cursor right eight characters by pressing K. Now press the
space bar (or any character other than I, J, K, or M). This will make
the cursor blank again, indicating that the Apple is again in text mode.
Type
FOX(space)

and your screen should look like this

```
THE QUICK BROWN FOX █JUMPED OVER THE LAZ
Y DOG'S BACK.
```

If you had continued typing, the text beyond the cursor would have been
pushed down the screen to make room for the new words. Try it and see.

At this point, you may continue to insert text or return to cursor
control mode and move to another place in the text.

13

UPPER CASE MODE

All that you have typed so far would be printed on paper in lower case.
To produce a character that will be printed in upper case, press ESC
before typing the letter. Note that the cursor is ^. This shows you
that the Apple Writer is in upper case mode.

Using the SHIFT key will NOT produce upper case characters.

The SHIFT key produces the character shown on the keyboard -- if the key
shows two characters, you will get the top character when you type SHIFT
and that key.

Using ESC and SHIFT together gives you an upper case character only
because of ESC. For example

If you type:	On the screen you see:	On paper you get:
P		p
SHIFT P		`
ESC P		P
ESC SHIFT P		@

Pressing ESC makes the next character you type appear on the screen in
black-on-white. All characters that APPEAR on the screen black on white
will be PRINTED in UPPER CASE. All others characters will be printed in
lower case.

Pressing ESC once sets upper case ONLY for the next character to be
typed, after which the mode returns to lower case. To change the case
of more than one character, you may want to use the case change mode.

CASE CHANGE MODE

Instead of changing a long string character by character, you may change
characters from lower case to upper case (or vice versa) by using case
change mode.

To put the Apple Writer into case change mode, you must first enter
cursor control mode (by pressing ESC twice, remember?) Move the cursor
so that it's next to the word or line you want to change, then press
CTRL-C. The cursor changes from + to %. Pressing J or K will change
the case of one character, pressing I or M will change the case of an
entire line (about 40 characters). Using REPT and case change mode
produces spectacular results.

Try an example. Press RETURN a few times to insert some blank lines on
the screen. Now type
SIR GAWAIN AND THE GREEN KNIGHT

Your screen should look like this

Although the words appear to be all capital letters, they will be
printed on paper in lower case. To use the case change mode to
transform them into upper case, move the cursor across the line, using I
in case change mode. Type ESC ESC CTRL-C I to produce a screen that
looks like this

See what happens when you use J, K, and M.

As the cursor passes over the characters, they change case. If they
were lower case, they will become upper case, and vice versa. This
works for left and right as well as up and down, changing whole lines at
once. If you move the cursor too far, and want to change the characters
back to their original case, simply move the cursor in the opposite
direction.

When you want to leave case change mode, press any character other than
I, J, K, or M. If you want to leave case change mode but stay in cursor
control mode, press ESC and the cursor will change back from % to +.

DELETION AND RETRIEVAL

For deleting characters, words, lines, or paragraphs, the Apple Writer
uses

Left arrow ⟵— for characters,
CTRL-W for words, and
CTRL-X for lines and paragraphs.

For most deletions, the Apple Writer saves the deleted characters in
what's called a "storage buffer" and can retrieve them from that buffer
and reinsert them in the text. To reinsert characters, move the cursor
to the place you want to insert the characters, then press the right
arrow key ⟶ .

Deleting, then reinserting, is one technique for moving small amounts of
text.

If you press REPT at the same time as any of the delete keys, you will
delete characters very fast. This can cause problems if you want to
retrieve those characters. The storage buffer holds only 256
characters, which is about 6 lines on the screen.

CHARACTER DELETION (⟵)

If you make a mistake when you are typing text, you may delete unwanted
characters by pressing the left arrow key ⟵— . You may hold down
REPT to delete a lot of characters quickly.

Try an example of deleting characters. Type
I ENJOY DISCO MUSICK

As you look at this sentence, you realize you've made a mistake.
"Music" doesn't end with a K. So you press ⟵— to delete K.

You look at the sentence again and realize you've made another mistake.
You really don't like disco music. So press
⟵— REPT to delete the whole sentence.

CHARACTER RETRIEVAL (→)

To retrieve characters you have deleted, press the right arrow key ─→ .
By holding down ─→ REPT, you may retrieve a lot of characters quickly.

The Apple Writer saves up to 256 deleted characters in the storage
buffer from which you may retrieve characters once. If you continue to
press the right arrow, you'll retrieve all the characters you've
deleted, plus any leftover characters in the storage buffer. After
retrieving 256 characters, you'll start over and retrieve them again.

For example, you have a change of heart and decide to retrieve your
sentence about disco music. Hold down ─→ REPT until the entire
sentence reappears on your screen.

Now, press ─→ REPT again and hold them down until you get several
copies of your sentence about disco music (and any other characters in
the storage buffer).

You now have a screen full of unwanted characters, which you can delete
by pressing CTRL-W REPT.

Pressing ─→ also retrieves text deleted by CTRL-W and CTRL-X.

WORD DELETION (CTRL-W)

To delete an entire word, press CTRL-W. For CTRL-W, a word is a string
(i.e., group of characters) preceded by a space. If you typed 100
continuous characters (without spaces), CTRL-W would define that as one
word and delete them all. Specifically, CTRL-W deletes characters to
the left of the cursor until it has deleted a space.

Since CTRL-W deletes characters preceding the cursor up to and including
a space, all the words in the storage buffer will be separated by
spaces.

PARAGRAPH DELETION

To delete an entire line or paragraph, press CTRL-X. This function
works in much the same way as CTRL-W, except that it stops after
deleting a RETURN (or 256 characters) rather than a space.

If CTRL-X has deleted 6 lines and still hasn't encountered a RETURN, it
will stop, the Apple will beep, and your screen will say

    <BUFFER OVERFLOW>

This means that the storage area for deleted characters is full, and any
more deletions will erase some of the present contents. This also could
happen with CTRL-W if you delete more than 6 lines of words.

If you continue to delete text after a BUFFER OVERFLOW, the Apple Writer
adds the most recent word or line to the buffer and erases the oldest
contents.

If you use a RETURN at the end of each line on the screen (a bad idea if
you plan to print your text), CTRL-X will delete only one of the lines.
If you type complete paragraphs separated by RETURNs (a good idea if you
plan to print your text), CTRL-X will delete the entire paragaraph.
Specifically, CTRL-X deletes characters to the left of the cursor until
it has deleted a RETURN or 256 characters.

MORE ON CTRL-W AND CTRL-X

Type the following lines

THIS IS THE FIRST LINE OF A NEW TEXT FILE. DELTA COMES BEFORE ALPHA IN
THE GREEK ALPHABET.

You want to switch the words "delta" and "alpha". Move the cursor so the
screen looks like this
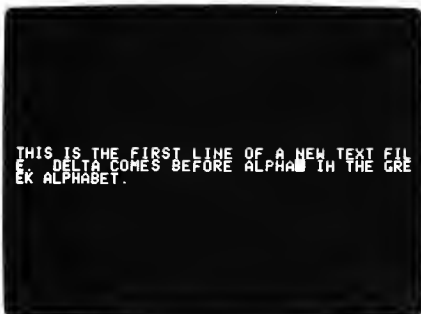
Press the space bar to leave cursor control mode and return to text
mode. Press CTRL-W. The sentence should now read

```
THIS IS THE FIRST LINE OF A NEW TEXT FIL
E.  DELTA COMES BEFORE█ IN THE GREEK ALP
HABET.
```

Now press ESC ESC to re-enter the cursor control mode. Press J until
your screen shows

```
THIS IS THE FIRST LINE OF A NEW TEXT FIL
E. █DELTA COMES BEFORE IN THE GREEK ALP
HABET.
```

Because the storage buffer has saved the word "alpha", you can retrieve
it by pressing the space bar, then pressing the right arrow key 6 times.
Now you should see

```
THIS IS THE FIRST LINE OF A NEW TEXT FIL
E.  ALPHA█DELTA COMES BEFORE IN THE GRE
EK ALPHABET.
```

Now move the cursor to the right of the word "delta", then delete and
save "delta" in the same way. Reinsert it between "before" and "in".
You should see

```
THIS IS THE FIRST LINE OF A NEW TEXT FIL
E.  ALPHA COMES BEFORE DELTA█ IN THE GRE
EK ALPHABET.
```

You can use this technique with much longer segments, using CTRL-X. You
may move any word or line anywhere on the screen, and delete up to 256
characters, or insert new words at any location. This is the essence of
text editing.

19

MORE CURSOR CONTROL

The Apple Writer provides four control functions for moving the cursor quickly through the text

```
This character:        Moves Cursor:

CTRL-B                 To file beginning
CTRL-E                 To file end
CTRL-T                 Up 12 lines
CTRL-V                 Down 12 lines
```

You may use all four functions in two of the modes (text and upper case), but only two of the functions, CTRL-T and CTRL-V, also work in case change and cursor control mode.

Try moving the cursor up and down in your text. Generally, if you press CTRL-T, then press CTRL-V without modifying your text, the cursor will be where it was before you pressed CTRL-T.

Here is an example of zipping the cursor through the text. Type 12 lines of your favorite song. If your favorite song doesn't have 12 lines, use this one:

The Spotted Cow (trad.)

One morning in the month of May
As from my cot I strayed
Just at the dawning of the day
I met with a charming maid.

My pretty maid now whither you stray
So early, tell me now
The maid replied, kind sir, she cried
I've lost my spotted cow.

No longer weep, no longer mourn,
Your cow is not lost my dear,
You'll find her down in yonder grove
Come love, and I'll show you where.

Now press CTRL-T then CTRL-V then ESC ESC CTRL-C CTRL-T. You should see
something like this
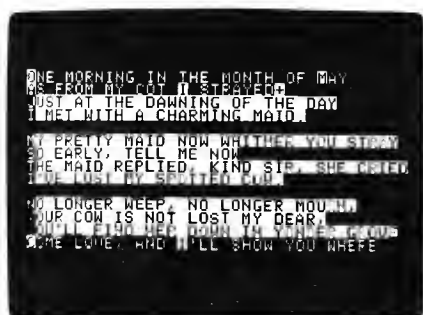
Now press CTRL-V and you should see
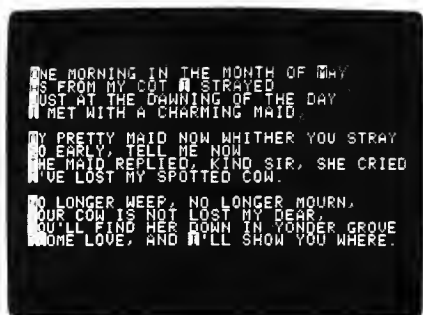
OTHER CONTROL FUNCTIONS
CTRL-D: DISK ACCESS

This function lets you use the disk operating system (DOS) from the Apple Writer. You may use CTRL-D from any menu and from anywhere in the text you're editing.

Type CTRL-D. (From a menu, you need to type CTRL-D and press RETURN.) The Apple Writer responds:

The next characters you type will be a command to DOS. For example, if you've forgotten the names of your files, type
CATALOG

The Apple Writer succumbs to DOS, which displays the catalog on the screen. It then asks for another disk command.

If you want to delete a file from your diskette, type
DELETE TEXT.FILENAME

If you have no more commands for DOS, and want to resume editing, press Q, then press RETURN.

CTRL-F: FREE MEMORY

To allow space in memory for making changes in a long text file, you should save a long file before filling all of your Apple's memory. To find out how much memory remains, press CTRL-F. Your Apple will beep and a message will appear at the bottom of the screen. For example, if memory has space for 12,886 characters, you'll see

<FREE MEMORY = 12886>

Your Apple's memory has space for 31,901 characters of text. By subtracting your files' free memory from 31,901, you will know how many characters you've written.

CTRL-K: SAVING A FILE SEGMENT

CTRL-K saves a copy of a segment of your file on a diskette. The segment to be saved must begin with a specified marker and end at the

22

present cursor position. You may want to insert a distinctive marker
such as && at the start of the segment to be saved. Be sure to delete
the marker when you want to print the text.

The Apple Writer searches for the marker by starting at the cursor and
searching to the beginning of the text for the first occurrence of the
marker. It will not search beyond the cursor for a marker--you can only
save segments above the cursor.

The "marker" referred to is a character or string that uniquely
identifies the beginning of the segment. If you wanted to save this:
    CATS HATE BEING CATEGORIZED

and you used "CAT" as the marker, you would only save the last word
because the search would find the "CAT" in "CATEGORIZED". In difficult
cases, you can insert a special marker and remove it later.

When you press CTRL-K, below the text on your screen, you'll see:

```
==== CTRL-K  TO COPY TO DISK THE
SEGMENT BETWEEN CURSOR AND A MARKER
ABOVE CURSOR, ENTER MARKER
```

After you have entered the marker, the Apple Writer will respond with

<STRING NOT FOUND>

if it can't find your marker, otherwise it will ask you to

ENTER FILE NAME:

At this point, choose a name for your file. BE SURE THE NAME IS ONE YOU
HAVEN'T ALREADY USED. Save the file segment on a diskette. Saving a
segment does not delete it from your text file.

The space available on the diskette and the space available in memory
are two limits on the length of a file segment saved on a diskette.

Do not use the name of the file you are editing or of any other file you
want to preserve on your diskette. If you save the segment by naming it
with the name of another file, you will lose the entire contents of that
other file.

CTRL-I: INSERTING A FILE

CTRL-I allows you retrieve a copy of a file from a diskette and add it
to your text. This is very useful for adding sections to your text and
for inserting a copy of sections that occur often in the text. Using
CTRL-I to insert a file, which might be a paragraph that you use
frequently, you save both time and typing. For example, think of the
time required to type the statement on the inside cover of this manual.

If you think the space in memory may be running short, check by pressing
CTRL-F. Also, before you use CTRL-I, save a backup copy of the file
you're editing. Check the available memory immediately after inserting
a file.

> WARNING: You will mess up the contents
> of memory if the Apple Writer tries to
> insert a file longer than the space
> available in memory.

If you do try to insert too long a file, the Apple Writer will fit in as
much as it can, then respond
I/O ERROR
or
<FREE MEMORY = 2>
depending on where in the file it stops. After flashing the I/O ERROR
message on the screen, it returns you to the menu. After flashing the
FREE MEMORY message, it returns you to the point at which the file it
inserted overlaps with the file you were editing.

AN EXAMPLE OF CTRL-I

Save "The Spotted Cow" or some text of your choice on a diskette. Start
a new file by selecting N from the editor menu. Type some lines, for
example:

    I must confess you're very kind,
    Very kind, said she.
    It's there you're sure the cow to find
    Come, sweetheart, walk with me.

    Then in the grove they spent the day
    And thought it passed too soon
    At night they homeward made their way
    While brightly shone the moon.

    So if I should cross the flowery glen
    Or go and view the plow
    She'd come and call me, gentle swain,
    I've lost my spotted cow.

Move the cursor to the top of the new file (try CTRL-B). Now, press
CTRL-I. The Apple Writer will respond with:

```
**** CTRL-I  TO INSERT A DISK FILE AT
THE PRESENT CURSOR POSITION.
ENTER FILE NAME:█
```

Type THE SPOTTED COW
(or the file of your choice).

The Apple Writer will insert that file in front of the cursor, leaving
the cursor at the end of this newly inserted file.

If you misspell the file name or enter the name of a nonexistent file,
the Apple Writer responds
FILE NOT FOUND
and returns you to the editor menu.

CTRL-P: POP

Pressing CTRL-P turns on a clicker in your Apple II. Each time the
cursor passes over a RETURN in the text, the Apple will make a clicking
sound. Sometimes this sound is very faint.

To stop the clicking, press CTRL-P again.

CTRL-P can be helpful when you're counting RETURNs in a document you
want to print. It tells you if you have a RETURN or a blank line that
is an artifact of the Apple II screen.

CTRL-S: SEARCH AND REPLACE

To view each occurrence of a string or to replace one string with
another, press CTRL-S.

At the bottom of the screen, you should see

```
█

**** CTRL-S. SEARCH & REPLACE
SEARCH ONLY.     ENTER: /AS IS/
SEARCH & REPLACE. ENTER: /AS IS/TO BE/
█
```

CTRL-S searches forward from the cursor position to the end of the text
for a string. It won't find strings above the present cursor position.
In many cases, before using CTRL-S, you may want to jump to the
beginning of the text (remember CTRL-B) so you can search through the
entire text.

DELIMITERS. Use "delimiters" to tell CTRL-S which characters you want
to find. Delimiters are characters that set off a string. The
diagonals (/) in the picture above are delimiters. Although you may use
any character for the delimiter EXCEPT the characters in a string, we
recommend using diagonals (/). If the string you want contains
diagonals, use (&) or some other little-used character for the
delimiters.

SEARCHING. To search without making any changes, enter one string, for
example:

   /Show me each of these/

If you enter only one string, the Apple Writer will prompt

```
==== CTRL-S. SEARCH & REPLACE         .
SEARCH ONLY,      ENTER: /AS IS/
SEARCH & REPLACE, ENTER: /AS IS/TO BE/
:/TEST/
TO CONTINUE SEARCH, PRESS RETURN
TO EXIT, TYPE ANYTHING ELSE ■
```

Press RETURN to start the search for the first occurrence of the string.
Each time you press RETURN, the Apple Writer will search for the next
occurrence of the string.

REPLACING. If you want to change some characters, enter two strings.
Use delimiters to separate the search string from the replacement
string, for example:

   /The way it is now/The way you want it/

If you enter both a search and a replacement string, the Apple Writer
will prompt

```
==== CTRL-S. SEARCH & REPLACE
SEARCH ONLY,      ENTER: /AS IS/
SEARCH & REPLACE, ENTER: /AS IS/TO BE/
:/PEN/PUN/
REPLACE (A) AUTOMATIC, OR (M) MANUAL
:
```

26

Press M to replace selected occurrences of a string after looking at them, press A for automatic replacement.

When entering strings, beware of these typical errors:

* Entering only one delimiter: /TEST

* Misplacing the delimiters in the entry: //TEST

* Entering less than three delimiters when you want to replace a string:

/TEST/REPLACEMENT
This results in searching, not replacing.

If you make a mistake entering the strings and delimiters, the Apple Writer usually gives you another chance to enter them correctly. However, if you want to replace a string and you accidentally enter only two delimiters, the Apple Writer will start searching without replacing. You may quit that search by pressing the space bar. Then press CTRL-S again to start the process for replacing.

REPLACING AFTER LOOKING. If you press M in response to the prompt about manual or automatic replacement, the Apple Writer will respond
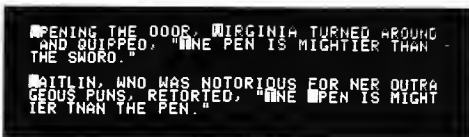

```
==== CTRL-S. SEARCH & REPLACE

SEARCH ONLY,       ENTER: /AS IS/
SEARCH & REPLACE, ENTER: /AS IS/TO BE/
: /PEN/PUN/
REPLACE (A) AUTOMATIC, OR (M) MANUAL
:M
TO REPLACE, PRESS CTRL R
TO CONTINUE SEARCH, PRESS RETURN
TO EXIT, TYPE ANYTHING ELSE █
```

Press RETURN to start the search for the first occurrence of the string you want to replace. The cursor will appear in front of the string to be replaced.

To replace an occurrence of the string, press CTRL-R. Press RETURN to search for the next occurrence of the string. For example, using the text in the photo below, if you want to replace some occurrences of "pen" with "pun", you would specify the following string:
    /pen/pun/

After selectively replacing some occurrences of the string, the screen should look like this


```
█PENING THE DOOR, █IRGINIA TURNED AROUND
 AND QUIPPED, "█NE PEN IS MIGHTIER THAN
 THE SWORD."

█AITLIN, WHO WAS NOTORIOUS FOR HER OUTRA
GEOUS PUNS, RETORTED, "█NE █PEN IS MIGHT
IER THAN THE PEN."
```

REPLACING WITHOUT SEARCHING. If you press A in response to the prompt about replacing manually or automatically, the program replaces strings without displaying them first.

Use this conservatively. Accidents do happen when you're entering delimiters and strings.

For example, if you use the search and replacement strings /do/does/, you'll replace "door" with "doesor".

MORE NOTES ON STRINGS AND DELIMITERS. You may use upper case characters for the entries and may delete characters using ⟵ , but when entering the search and replacement strings, you CAN'T retrieve deleted characters with ⟶ .

You may use the null string (//) as the replacement string. This will delete the target string you specify and replace it with nothing (not even a blank). If you want to replace a character with a blank, specify / / as the replacement string.

DON'T CARE CHARACTER. You may specify some characters for a string and indicate that you don't care what the other characters are. To make the don't care character, press ESC then press the space bar. This will produce a character on the screen, which looks like this:

For example, if you wanted to find every instance of L, followed by anything, followed by T, you would type

This search leads you to words such as

lot
clot
delete
little, and
softball team.

You may use any combination of characters and Don't Care characters for your string. For example, to find "Apple" or "apple", type

for the search string.

Beware of using the don't care character to replace strings. For
example, if you specify

the Apple Writer will delete all characters from the cursor position to
the end of the file.

For both searching and replacing, when the Apple Writer reaches the end
of the text, the Apple will beep and the screen will flash:

    <DONE>

or, if the target string wasn't found,

    <STRING NOT FOUND>
    <DONE>

After this message, the Apple Writer returns to the cursor position from
which it started the search.

CTRL-Y: MOVING A BLOCK OF TEXT

CTRL-Y removes a specified block of text from one place in the file and
inserts it at another specified place. You specify markers to isolate
the block you want to move and to point to the new location for the
block. You may want to insert distinctive markers, which you delete
after completing the move.

For example, type:

ALAS, POOR YORICK!
A FELLOW OF INFINITE JEST,
I KNEW HIM, HORATIO,
OF MOST EXCELLENT FANCY.

The second and third lines are reversed. You could use CTRL-W or
CRTL-X, but that would be very cumbersome for larger amounts of text
(e.g., if these sentences were page-long paragraphs).

CTRL-Y moves blocks of any length. Place the cursor as shown:
    ALAS, POOR YORICK!
    A FELLOW OF INFINITE JEST,
    +I KNEW HIM, HORATIO,
    OF MOST EXCELLENT FANCY.

Now press CTRL-Y. Your screen should say:

```
**** CTRL-Y. RELOCATE TEXT
ENTER ORIGIN MARKER:█
```

As with CTRL-K, the specified marker must be at the beginning of the block to be moved, and the cursor position marks the end. The chosen marker must be unique within the block for the entire block to be moved.

Because CTRL-Y can place a block anywhere in the text, it searches the entire file for the marker.

For this example, type "A " for the origin marker. Be sure to include the space after the A and to capitalize the A if you used upper case when entering the text.

After you have entered the origin marker, the Apple Writer will search from the present cursor position to the beginning of the file for the marker. If the Apple Writer finds the marker, CTRL-Y saves the segment on a diskette under a special name.

NOTE: The special disk file name is TRANSFER FILE. This file name cannot be used for anything else. You may delete this file from your disk, but DON'T LOCK IT. (See the DOS manual for details of locking and unlocking disk files.)

The Apple Writer will ask you where to put the block of text by displaying:

ENTER DESTINATION MARKER:

Remember the block will be inserted to the left of (or above) the destination marker you specify. That marker may be anywhere in the text file.

For this example, use
OF MOST
as the destination marker. The result will be:
    ALAS, POOR YORICK!
    I KNEW HIM, HORATIO,
    A FELLOW OF INFINITE JEST,
    OF MOST EXCELLENT FANCY.

The cursor always appears at the end of the just-inserted block.

If CTRL-Y doesn't find the origin marker, the screen will display:

<STRING NOT FOUND>

and the Apple Writer will return you to your place in the text.

To move paragraphs and their RETURNs correctly will take some practice. The cursor positions shown in this example will reposition lines and paragraphs correctly.

Remember: The BLOCK TO BE MOVED is between the present cursor position and a specified marker. The BLOCK DESTINATION may be ANYWHERE in the file. Therefore, take care in the choice of destination marker. Placing a special marker may be necessary. This marker is easy to delete after the block has been moved, since the cursor will be right next to it at the end of the move.

EXTRAORDINARY CHARACTERS

The characters found on many printers may differ from the characters generated by Apple II. In general, all the letters, numbers, and other characters will be printed as they appear on the Apple II screen (except, of course, for lower case letters).

When you type:	You get on paper:	You see on the screen:
CTRL-N	{	
ESC CTRL-N	[	
shift M	}	
ESC shift M	]	
shift N	~	
ESC shift N	^	

The printer you use may produce some different characters as well, so experiment with non-ordinary characters before using them a lot. See Appendix D for a list of ASCII characters and what to type to produce them.

RESET AND OTHER DISASTERS

If you accidentally press RESET, you almost always return to the editor menu or the print menu--if you have an Apple II Plus or an Apple II with an Autostart ROM (Apple Product #A2M0027). If you press RESET, and see a menu on the screen, check the contents of memory before resuming editing, and save the memory if it's intact.

If you have an Apple with the old monitor ROM, when you press RESET you'll get the monitor prompt (*).

The possibility exists that you may destroy some of the contents of the Apple's memory while you are editing if you accidentally press RESET or accidentally choose option Q from the menu.

Whenever the screen displays a monitor or BASIC prompt character (see below), you have left the Apple Writer and are in jeopardy of losing whatever you have in memory. What you want to do is restart the HELLO program without destroying the memory. One way to do that is to use the following procedure, which preserves the file in memory:

The screen shows: You type:

*   (monitor prompt)   3D0G (return)
                            (that's D zero G, not dog)

] (Applesoft prompt)   FP (return)
                            (To start Applesoft again)
                            RUN HELLO (return)

> (BASIC prompt)   RUN HELLO (return)

This will cause the text editor program to be loaded and run. In a moment, you will be presented with the editor menu. Of the options on the menu, E puts the Apple into text mode, preserving the present memory contents. S saves the present memory contents on a diskette. N erases the memory contents, allowing you to start a new file.

Before saving the contents of memory, examine what's there to see if it's worth saving. If memory contains an edited version of an old file, DON'T save it with the old name unlesss you are sure that you want to erase the old file.

Another reminder: If you do press N, the Apple Writer will ask
ERASE FILE IN MEMORY (Y/N)?
which gives you one more chance to save the file. The Apple Writer returns to the menu if you respond N to the question about erasing the file in memory or if you press RETURN.

If your Apple reverts to BASIC and you choose to abandon the file in memory and don't want to return to the Apple Writer, be sure to reinitialize Applesoft by typing FP or booting a new diskette.

If you start the Apple Writer and press E in response to the editor menu before creating or loading a file, you may get the message
NO FILE IN MEMORY
or you may be presented with a screen full of flashing and inverse characters. Backtrack to the menu (ESC ESC CTRL-Q) and press N to create a new file or L to load a file.

ANOTHER POSSIBLE DISASTER: If you have successfully loaded or created a new file and the screen displays lots of flashing inverse characters, the Apple may have a hardware problem. Have the system checked.

A FINAL NOTE: It's a good practice to save a copy of the contents of memory frequently.

CHAPTER 3
PRINTING

The print program lets you print your text files on paper. To do that, you need a printer connected to the Apple's printer controller card. Appendix E gives suggestions on connecting your Apple to a printer.

Using the print program, you can set the format for a document in a variety of ways. You can even change the format of a page while a file is being printed, and print one file or a series of files as a single document. You may use disk commands from the print program as well as from the editor program, as described in the section on CTRL-D in Chapter 2.

The rest of this chapter assumes that you have installed a printer, have connected it to your Apple, and are now ready to start printing, perhaps for the first time.

STARTING

Make sure the diskette containing the Apple Writer is in drive 1. We're assuming the editor program is up and running and the editor menu is on the screen. Select the print option from the editor menu and press P. This loads and runs the print program automatically.

The screen should look like this
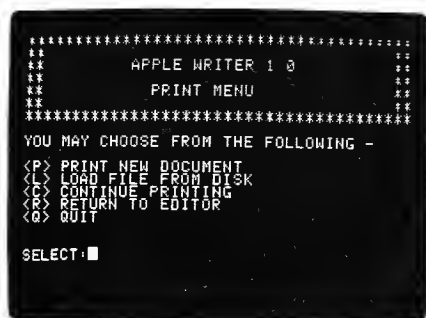
This is the "print menu". At this point, the only program in the Apple's memory is the print program; the editor program is no longer present. However, memory also contains the text file you last edited.

To describe the print options, we'll follow the order of a typical operation of the print program. We'll start with printing a single file, then describe printing multiple files as one document.

LOAD FILE FROM DISK

If the file you want to print is not in memory, press L. The print program responds:

ENTER FILE NAME

Type the name of the file.

If you misspell the name, or the diskette doesn't contain a file with the name you typed, or some disk error occurs, the program responds:

FILE NOT FOUND

then returns you to the print menu.

Now you can press L and try loading the file again. Once you have succeeded in getting the file into memory, you can use either the print or continue option to print the file.

PRINT NEW DOCUMENT

The P option is the heart of the print program. It starts the process of printing a new document. The printed file will begin at the top of a new page, and, if you choose, it will have a heading and a page number appearing at the top of each page.

In option P, the Apple Writer leads you through the final steps of getting ready to print a file: setting the specifications for the format of your document, typing a heading, and starting the printer.

PRINT CONSTANTS

Before printing a file on paper, the print program sets up the details
of the format for the document by referring to PRINT CONSTANTS, one of
the files of the Apple Writer. PRINT CONSTANTS contains a set of
specifications for the format of a standard page. Select the print new
file option from the print menu by pressing P. The screen will show

```
THE FOLLOWING PRINTER CONSTANTS ARE SET
(A) LEFT MARGIN               = 7
(B) RIGHT MARGIN              = 70
(C) TOP MARGIN                = 1
(D) BOTTOM MARGIN             = 3
(E) SPACES BETWEEN LINES      = 0
(F) LINES PER PAGE            = 66
(G) SINGLE PAGE (1)YES,(0)NO  = 0
(N) DATA BIT 8  (1)SET,(0)CLEAR = 1
(I) PAGE NUMBER (0:DON'T PRINT) = 0
(J) PRINTER ADDRESS           = $C100

TO CHANGE, ENTER LETTER OF ITEM.

TO ACCEPT, MAKE NO ENTRY: ■
```

Each specification is defined in the next section, Format
Specifications. The specifications as shown above are designed to work
for the average printer, but you may need to change them for your
particular application. The instructions that come with your printer
should tell you which values to substitute for the ones in PRINT
CONSTANTS.

To change any of the specifications, type the letter corresponding to
it. For example, if you type J, the print program will respond:

ENTER NEW VALUE FOR J:

Type the new value for that specification, then press RETURN. When you
have changed all the specifications so they fit your document and
printer, press RETURN.

After you change the specifications, the Apple Writer revises PRINT
CONSTANTS on the diskette, changing the file so it contains the numbers
you entered. The next time you review PRINT CONSTANTS, it will contain
your specifications instead of those for a standard page. If you print
a series of documents with the same format, you may use the same values
for PRINT CONSTANTS.

Do not remove the PRINT CONSTANTS file from the disk! Also, do not lock
the file.

FORMAT SPECIFICATIONS

This section defines each item in PRINT CONSTANTS. Using these definitions, you can determine the correct numbers for PRINT CONSTANTS for your document and printer.

(A) LEFT MARGIN sets the distance in columns from the left edge of the paper at which the printing of a line will BEGIN. Some printers (e.g., the Centronics) can't print in column 0, so check your printer's manual before specifying column 0 for the left margin.

(B) RIGHT MARGIN sets the distance in columns from the left edge of the paper at which the printing of a line will END. For example, if you set the left margin at 10, and the right margin at 75, the printer will print each line between columns 10 and 75 inclusive.

(C) TOP MARGIN sets the distance in lines between the printed title and page number (collectively called the "heading") and the first printed line.

(D) BOTTOM MARGIN sets the distance in lines between the last printed line at the bottom of the page and the heading that begins the next printed page.

(E) SPACES BETWEEN LINES sets the number of spaces between lines. Use 0 for single-spacing, 1 for double-spacing, 2 for triple-spacing, and so forth.

(F) LINES PER PAGE sets the number of lines per page, which depends on the type of printer. Consult your printer's manual if in doubt. Printers that print continuous forms rather than single pages may have an automatic "step over", which produces a margin at the bottom and top of the page. The most common numbers of lines for an 11-inch page are:

# lines per inch	lines per page without step over	with 1-inch step over
6	66	60
8	88	80

(G) SINGLE PAGE (1)YES, (0)NO makes it easier to use single-sheet printers. The print program stops printing at the end of each page so you can insert and align a new sheet. You then press the space bar to resume printing.

(H) DATA BIT 8 (1)SET, (0)CLEAR makes the representation of the characters sent by Apple II to the printer agree with what the printer expects to receive. Very few printers need this option. See Appendix E for more information and consult your printer's manual for information about this option.

(I) PAGE NUMBER (0 = DON'T PRINT) sets the number of the first page of your document. You may set the page number anywhere in the range from 1 through 65535. The print program will print the page number at the center of the top of each page automatically, then increment it for each subsequent page. If you choose zero for the page number, page numbers won't be printed. If you enter a heading (see below), the page number is printed after it, separated by a space.

This option is very useful if you need to print a document in sections. You may reset the page number to start at any page in a document, e.g., page 256.

(J) PRINTER ADDRESS tells the program which Apple slot contains the card that controls the printer. It sets a hexadecimal address (the "$" indicates this). To choose the address

For Slot #	Use Address ($CN00)
1	$C100
2	$C200
3	$C300
4	$C400
5	$C500
6	$C600
7	$C700

When you change this number, don't type the "$" sign. Check the menu after you have entered a new address to make sure it is correct.

Some printing situations may require an address not listed above. Two examples are the Centronics 779 printer, which uses $CN02 for its printer address, and loading a driver (printer controller program), which uses $300 as its printer address.

If you use the wrong address, the print program will search in vain for that address until you press RESET. See Appendix B for suggestions on what to do if this happens.

PAGE HEADING

After you have set the specifications for the format, the print program
will ask you to enter a page heading. This is optional. The heading
may be up to 60 characters long. The heading will appear centered at
the top of every page with the current page number to the right of it
(if you use page numbers). You may use upper case letters in the
heading by typing ESC just as in the editor program; however, you can't
use ESC ESC CTRL-C to capitalize multiple characters. Enter the heading
or press RETURN if you don't want a heading.

STARTING THE PRINTER

As soon as you enter the heading, or press RETURN, the print program is
ready to start the printer. The screen should say

```
    ENTER PAGE HEADING (OPTIONAL)


    PRESS ESCAPE FOR THE MENU,
    PRESS RETURN TO START PRINTING: ▮
```
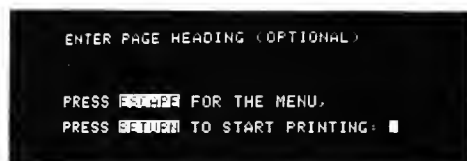
You may want to take this moment to look over the printer and its
connection to the Apple. Is the printer on? Does it have enough paper
for your document? Is the paper set so the print will appear on the
page where you want it?

You may either run the printer or not. If you decide at this point you
aren't ready to run the printer, press ESC to return to the print menu.
If you press RETURN, the print program immediately starts the printer.

When you press the RETURN key, the screen should go blank for a couple
of seconds, then you may see streams of unreadable text pouring across
the screen (yes, this is ok!) at which point the printer should start
printing.

38

STOPPING THE PRINTER

If you must stop the printer, press the ESC key. When the printer
reaches the end of the line it's printing, it will stop and return the
Apple to the print menu. Some printers store more than one lines worth
of characters in a buffer--they'll print until the buffer is empty.

OTHER PRINT MENU OPTIONS

(C) CONTINUE PRINTING will print many files as one document. Use option
C when your document is written in several files because it is too long
to fit into memory all at once (e.g., is longer than about 16 pages).

For example, if you have two files that you want to print as one
document, print the first one using the P option. When this is done,
load the next file, using the L option. Using option L will NOT cause a
loss of the printing position on the page or the page number. Use the C
option to continue printing. Printing will pick up at the line below
where it left off. You can repeat the sequence of L and C options any
number of times.

If you don't use page numbers in your document, you can use C to print
multiple copies of the same document, as long as you end the text file
with !np. However, if your document has page numbers, use option P to
print multiple copies.

(R) RETURN TO EDITOR loads and runs the editor program. The Apple
Writer erases the print program from memory, but preserves the text file
currently in memory.

(Q) QUIT stops the print program and the Apple returns to BASIC.

SUMMARY OF PRINT OPTIONS: To print a document, first use the L option
to load the text file, then use the P option to print it. If the
document to be printed is in several files, use the C option to continue
printing. Use the R option to return to the editor and the Q option to
quit and return to BASIC.

TEXT-EMBEDDED PRINTER COMMANDS

To change the format of a page while it's being printed, you can insert characters in the body of the text, which the print program interprets as instructions for reformatting the page. These characters are called "text-embedded printer commands". The commands themselves are not printed.

The commands can change the margins (left, right, top, and bottom) and the number of spaces between lines; justify the print to the left, right, or center of the page; and make the printer move to a new page.

Text-embedded printer commands override the specifications in print constants. To change a value back to what you specified in print constants, you must use another text-embedded printer command.

FORMAT

The format of a command is:
!{command}{number}

Each command must appear on a line by itself--that is, the command must be preceded and followed by a RETURN. For example, to change the left margin to column 12, you would type
RETURN!1ml2RETURN

If you type a valid command using the correct format, the print program will execute the command and will print only the RETURN preceding the command. The line containing the command and its RETURN won't be printed. The commands most often appear at paragraph breaks where you want a RETURN.

When you type the command to change the left margin to 12, the screen will show
something like this

```
NOW WE WILL INDENT THE LEFT MARGIN
!LM12
LOOK, MA, NO HANDS!
NOW RETURN TO NORMAL.
!LM7
THERE, THE MARGIN IS FLUSH LEFT AGAIN.
```

And the printer will print

Now we will indent the left margin...
     Look, ma, no hands!
     Now return to normal.
There, the margin is flush left again.

If you use incorrect format, then the command WILL be printed because the print program will treat the command just like any other text.

The format is INCORRECT if the command has:

   * spaces or other characters between the first RETURN and the exclamation point, or

   * spaces between the exclamation point and the command, or

   * any character entered in upper case (black on white as you look at it on the screen).

If the format is correct but the command itself is INVALID, the print program will print the command.

SUMMARY OF COMMANDS

Text-embedded printer commands override the numbers assigned to the specifications in PRINT CONSTANTS. You may insert the commands at any point in the text.

Type a command at the beginning of your text to set the mode for justifying the page. Type commands later in the text to change any of the specifications in PRINT CONSTANTS or to get a new page. The following table lists the commands and what they do.

```
COMMAND:      SETS:

!lm{number}   Left margin to column {number}

!rm{number}   Right margin to column {number}

!tm{number}   Top margin

!bm{number}   Bottom margin

!sp{number}   Number of spaces between lines

!fj           Fill justify mode

!lj           Left justify mode

!cj           Center justify mode

!rj           Right justify mode

!np           A new page
```

If you don't enter a number in the commands for margins and for spaces
between lines, the print program will use a default of 0. That is, if
you use !lm as a command, the margin will be set to column 0.

JUSTIFY MODES

To "justify" your text, the print program aligns the printed text along
the left or right margin, or centers it on the page, depending on which
justify mode you tell it to use.

LEFT JUSTIFY MODE is the default mode for the Apple Writer. It aligns
the left edge of the printed page, so it looks much like a page typed on
a typewriter. Left justify fills the line, but does not pad the line
with spaces. Then left justify pushes the line to the left until the
line is flush with the left margin. This document is printed in left
justify mode, which is less formal than fill justify.

FILL JUSTIFY MODE both "fills" and justifies each line. To "fill" the
line, the print program puts as many complete words as possible between
left and right margins. To justify the line, the print program will add
extra spaces between words to make the printed line fit exactly between
margins. Most books are printed in fill justify mode. The following
paragraph is printed in fill justify mode.

When the print program comes to a RETURN in your text, Fill justify mode
does not fill or justify . The print program ends the line just after
the RETURN, and does not pad the line with spaces.

One thing to watch
out for with this
mode: Fill justify
can produce somewhat
strange results if
it is required to
cram many very large
words into narrow
margins. Since the
print program
doesn't know how to
hyphenate words, it
is stuck with trying
to fit as many as it
can on one line, and
ends up stuffing
many spaces in
between the big
words, which can
make your prose look
very poetic, but
maybe not too
understandable.

RIGHT JUSTIFY MODE does the same things as left justify except right
justify pushes each line to the right margin.

CENTER JUSTIFY MODE centers a printed line between the left and right
margins (again, without padding spaces). You might use center justify
to center a title.

Here is a demonstration of left, center, and right justify modes:

                    Left Justify:

Now
that we
have seen the
manner of the sky
in the path of a storm
we might then heed such signs
as might be provided us from less
sunlit places. Places not told
of in reports of weather
or signs of rain might
give us portent
all the
same.

                   Center Justify:

                        Now
                     that we
                  have seen the
                 manner of the sky
               in the path of a storm
             we might then heed such signs
          as might be provided us from less
           sunlit places. Places not told
               of in reports of weather
                or signs of rain might
                  give us portent
                     all the
                     same.

                    Right Justify:

                                        Now
                                    that we
                               have seen the
                            manner of the sky
                          in the path of a storm
                       we might then heed such signs
                    as might be provided us from less
                       sunlit places. Places not told
                            of in reports of weather
                            or signs of rain might
                               give us portent
                                    all the
                                    same.

UNPRINTED COMMENTS IN THE TEXT

You can use text-embedded printer commands to include comments that won't be printed in your text. To do this, type a command but stop before you type the final RETURN and insert your comment before that RETURN.

The total length of the comment and the command must be less than the length of the printed line. If the right margin is 79 and the left margin is 7, you may use no more than 72 characters for both the comment and the command.

For example, you could insert this comment
EDITOR: THE FOLLOWING IS OPTIONAL

in your text by entering

```
!LJ EDITOR: THE FOLLOWING IS OPTIONAL.
```

If the comment exceeds the length of the printed line, the comment will appear in your text.

Please note that this is a slightly hazardous use of commands, so be conservative.

APPENDICES

APPENDIX A: SUMMARY OF COMMANDS

ESC

Press ESC once to make the Apple Writer enter the next typed character
in upper case. The TV screen shows upper case characters as black on
white. Cursor: [^].

Press ESC ESC to put the Apple Writer into cursor control mode. Cursor:
[+]. In this mode, the following keys move the cursor around the screen
without changing the text:
```
    KEY:    MOVES CURSOR:
    I       Up one line
    M       Down one line
    J       Left one character
    K       Right one character
```
To leave this mode, press any key OTHER than I, J, K, or M, or CTRL-T or
CTRL-V.

Type ESC ESC CTRL-C to put the Apple Writer into case change mode. In
this mode words passed over by the cursor will be changed from upper to
lower case or vice versa. Cursor: [%]. To leave this mode, press any
key OTHER than I, J, K, or M. To leave this mode but stay in cursor
control mode, press ESC.

Type ESC ESC CTRL-Q to leave text mode and return to the editor menu.

ARROWS

LEFT ARROW KEY, ⟵

In text mode, pressing this key deletes the character to the left of the
cursor. The deleted character is saved in the 256-character storage
buffer.

RIGHT ARROW KEY, ⟶

In text mode, pressing this key retrieves the last deleted character
from the 256-character storage buffer and puts it back on the screen at
the cursor position.

CTRL CHARACTERS

Here is an alphabetical list of the control characters.

CTRL-B moves the cursor to the beginning of the file.

CTRL-C, as noted under ESC, puts the Apple Writer into case change mode.

CTRL-D runs DOS from inside the Apple Writer. You can use any DOS command in response to the prompt. Pressing Q, then RETURN takes you back to text mode. DOS can be invoked from both the editor menu and the print menu by typing CTRL-D RETURN from the menus or CTRL-D without the RETURN when you're editing. To return to the menu, press Q, then RETURN.

CTRL-E moves the cursor to the end of the file.

CTRL-F shows the amount of free memory left.

CTRL-I inserts a file from a diskette into the file in memory at the cursor position. The cursor appears at the end of the inserted text.

WARNING: If the inserted file is longer than remaining free memory, part of the file in memory will be destroyed.

CTRL-K saves a segment of a file on a diskette. The saved segment may be used later as a file, or it may be inserted into another file.

CTRL-P makes the speaker in the Apple click every time the cursor crosses a RETURN.

CTRL-S searches for a string of characters. Subsequently, you may type CTRL-R, which replaces one specified string of characters with another specified string.

CTRL-T moves the cursor up the screen 12 lines at once.

CTRL-V moves the cursor down the screen 12 lines at once.

CTRL-W deletes the word to the left of the cursor. It stops deleting after it has deleted a space. The deleted word can be retrieved by pressing the right-arrow key or using the right arrow and the REPEAT keys.

CTRL-X deletes backwards from the current cursor position to a RETURN.
Deleted characters are saved in the 256-character storage buffer. If
more than 256 characters (approximately 6 lines) are deleted, deletion
will stop, and BUFFER OVERFLOW will flash briefly. Deleting more
characters will erase the oldest characters in the buffer. Otherwise,
you can retrieve the deleted text by pressing the right-arrow key.

CTRL-Y moves a block of text from one position in the file to another.
CTRL-Y searches backwards from the current position of the cursor to
find a marker in the file. Then it removes the block of text to the
TRANSFER FILE on a diskette, after which it searches from the top of the
file in memory for another marker and inserts the text just before it,
placing the cursor at that point.

ASCII FUNCTIONS

Pressing: Has the same effect
             as pressing:

CTRL-M   RETURN
CTRL-H   ⟵
CTRL-U   ⟶

APPENDIX B: STRATEGIES

PRINTING PROBLEMS

Here are some symptoms of common printing problems, and suggestions for solving them. When you're trying to produce a nicely printed document, you may encounter two types of problems: hardware mysteries and incorrect format. If the printer produces strange characters or nothing, it's often due to a hardware mystery. If the format of your document looks strange, it's most likely due to incorrect format.

HARDWARE MYSTERIES usually fall into one of three categories:

* The printer is producing strange characters that look remarkably like the strange characters on the screen. Most likely the printer and the Apple are set up for different rates of character streams pouring out of the Apple. Possibly you need to change bit 8 in the PRINT CONSTANTS from a 0 to a 1 or vice versa. Reread the instructions that came with your printer and the instructions for the printer interface card.

* There are strange characters on the screen, but nothing happening at the printer, and the strange characters on the screen are racing by. Perhaps the connection between the Apple and the printer deserves closer inspection.

* Nothing at all happens, the screen is blank and the Apple and printer are doing nothing. Perhaps you don't have the printer interface card in the right slot, or the slot doesn't agree with the address you specified to the print controller program. Check the following things:

1. Is the printer turned on?
2. Is a printer error light on? The printer may be out of paper or ribbon.
3. Press RESET, and see Reset and Other Disasters in Chapter 2 if you don't get the print menu. Save your file if you do get the print menu.
4. The Apple was probably sending out the characters to the wrong slot. TURN OFF THE APPLE, then check which slot holds the print controller card, and make sure that the card is plugged in correctly and firmly.
6. Run the print option again and make sure that the printer address is right.

INCORRECT FORMAT. Here are three examples of common errors in format, along with suggestions for correcting them.

* A lot of letters that should have been capitalized aren't. This is because it takes practice to spot such things as lower-case sentence beginnings on the screen. This symptom disappears as you learn how to see the black-on-white as upper case.

* The entire text is pushed to the left of the page--this might occur if you're using a printer that can print lines wider than 40 columns. This happens because you ended too many lines with a RETURN. Remember that RETURN causes the current line to end, and that the printed line may equal two of the lines you see on the screen. To avoid this problem, use two RETURNs at the ends of paragraphs.

* A page division happens at the worst possible place. To solve this problem, see the section in Chapter 2 on text-embedded printer commands. You can enter a command to start a new page at any point in the text.

HELPFUL HINTS

Here are some helpful hints for using the Apple Writer.

FILE PRESERVATION

* Save your files often.

* Be sure to save your file before printing it.

* Remember to save the revised version after you edit a file.

* Save two copies--one on your working diskette, one on an initialized back-up diskette. You can use the save option twice, inserting the back-up diskette in drive 1. Or you can keep the back-up diskette in drive 2 and save the file first to FILENAME, D1 then to FILENAME, D2.

* To preserve versions of a document, when you're loading a file or creating a new file, include a number in the name of the file (e.g., version1, version2, version3).

* Make a copy of all diskettes that contain valuable files. Having a good copy (or even multiple good copies) on only one diskette is asking for trouble.

* Lock important files. See the DOS manual for instructions on locking and unlocking files.

* Use the date as part of your filename.

SPEEDING UP EDITING

* When you're entering a new document, and you want to capitalize an entire line or paragraph, enter the line, use ESC ESC CTRL-C I to change the entire line, then press the space bar CTRL-E to move to the end of the document and enter more text.

* Use REPT with the cursor control characters for rapid movement of the cursor.

* If you accidentally press ESC and don't want upper case mode, press ESC again, then press the space bar and you're back in text mode.

* For a document that you're printing from multiple files, insert !np at the end of each file if you want a page break between sections. This eases the process of restarting if the printer runs out of paper or ribbon or some such. If you have !np at the beginning of a file, you get blank pages inserted and this messes up the page numbers for your document.

* Use the text-embedded margin commands (e.g., !lm30) to simulate tabs, for example, to indent a section of a paragraph.

CTRL FEATURES

* DOS commands: use CTRL-D to print the catalog on the screen and delete unwanted files. After pressing CTRL-D, type
CATALOG
to print the catalog on the screen. Type
DELETE TEXT.FILENAME
to delete your file. You can type
CATALOG
again to make sure the file was deleted.

* CTRL-K: use CTRL-K to save your file without leaving the editor--this takes fewer steps.

* CTRL-S:

Use CTRL-S to find a section of a document. It's much faster than
CTRL-V or CTRL-T. Search for a word you know occurs in the section.

Use the don't care character as part of the search when you want to find
capitalized and uncapitalized versions of the same word.

Bracket the search string with blanks to avoid finding words containing
that word. For example, use / the / instead of /the/ so you won't find
"there", "other", and "breathe" when you want "the".

As you enter text, insert a marker (e.g., >>>) if you can't think of the
word you want or if you're not sure the spelling is correct. Later,
when you've thought of the word you want and you have your dictionary
handy, search for the markers and edit the text.

Use CTRL-S to change the margin settings easily. One way to do that is
to use the don't care character as the search string /! m/ and
selectively replace the commands you want to change.

52

APPENDIX C: TEXT OF THE TUTORIAL

WELCOME TO THE APPLE WRITER

This program treats your screen like a
typewriter: you can type, erase, move
words around, and lots more.

The blinking rectangle in the upper
left-hand corner is the cursor.

Find the key marked ESC and press it
TWICE. The first time you do the
cursor looks like this: ^
the second time it looks like this: +

Now press ONLY the M key: the cursor
will move down to the next lower line.
Press M until the cursor reaches the
bottom of the screen. If the cursor
reverts to □, press the ESC key twice.
To continue reading this, press M
until new text appears at the bottom
of the screen.

Good, you're here. Don't worry if you
type characters by mistake. It doesn't
matter, and by the time you're done
with this tutorial you'll know how to
correct any such errors.

Four different cursors are used in the
Apple Writer. You'll get to use three
of them in this tutorial.

CURSOR   HOW USED   HOW TO GET IT

  □   entering text   press space bar

  ^   capitalizes   press ESC

  +   moves cursor   press ESC ESC

Does the cursor still look like +?

If not, press the ESC key twice.

With the + cursor, the I, J, K, and M
keys will move the cursor. Notice what
happens when you use the keys at the
start and end of lines.

     I   up
     J   left
     K   right
     M   down

Try using them. With the + cursor use
the I or M key to read new information
or retrieve information that has
scrolled off the screen.

Next let's move the + cursor faster!
Hold down the REPT key and press I.
The cursor zooms up the page! Press M
while holding down the REPT key and the
cursor'll zoom down the page. Try
using J and K with the REPT key too.

Now let's get you to type something.
If this explanation scrolls off the
screen, and you want to retrieve it,
use the + cursor and the I key.

Use the M key to move the + cursor
down the page until it's on the blank
line after the "First Official Blank
Line:" after the next paragraph.

Now get ready to type: make a □ cursor
by typing the space bar (or any key
except I or J or K or M). Next, type
a few lines. When you're done, press
ESC twice to get the + cursor, and use
the M key to see new information.

First Official Blank Line:

The keyboard is very similar to a
typewriter's. One main difference is
that you can keep typing at the edge of
the screen: whatever you type will simp
ly be displayed on the next line, as sh
own here. You may have seen this happe
n when you typed in your Official Blank
Line; the phenomenon is often called "
wrap-around".

When you use the Apple Writer to print
text onto paper, wrap-around does not
occur. Wrap-around has been avoided in
the tutorial to make it easier to read.
The manual discusses the issue in more
detail.

The Apple Writer has many features that
let you modify what you type. With the
□ cursor, the left-arrow key deletes
the character before the cursor. The
right-arrow key makes deleted
characters reappear.

Here's a chance to try using the left-
arrow and right-arrow keys:

Second Official Blank Line:

Because the Apple screen cannot display
lower case, all the characters you see
on the screen are upper case. But when
this document is printed on a printer,
you'll see both upper and lower case
letters. The screen's white-on-black
letters will all be lower case. The
black-on-white letters, as at the start
of sentences, will print as upper case.

To make upper case letters, press the
space bar, the press the ESC key ONCE
to make the cursor look like this: ^.
The next character you type will be
shown black-on-white and will printed
on a printer as upper case. Notice
that after typing one character, the
cursor looks like this: . For now,
you must press ESC once to make a ^
cursor before each capital letter.

Here's a chance for you to try typing
with upper case letters.

Third Official Blank Line:

Next you'll learn how to leave the
editor, and save this file, including
your sample typing. Read everything
from the word START to the word END

before you type anything. A summary of
the instructions appears after the
discussion.

START

You need to know how to use the special
command CTRL-Q, called "control Q".
To use CTRL-Q, hold down the key marked
"CTRL" while you press the Q.

To leave the editor, use:
ESC ESC CTRL-Q
You'll next see the editor menu. The
menu tells you things that you can do
at that point.

If you turn off your Apple without
saving the file you are working on, you
will loose the file and all the
changes you made. The Save option on
the editor menu allows you to save the
file you've been editing on a diskette.

To save a file, use:
S
and press the RETURN key. You will
be asked the question
   USE "TUTORIAL"
   AS FILE NAME (Y/N) ?
since the editor remembers that you
last loaded a file called "TUTORIAL".

It's not a good idea to save this file
using the same name, since this file
now contains your sample typing. So
when asked whether to use "TUTORIAL" as
the file name, type N for no, then
press the RETURN key. You'll then see
the message
   ENTER FILE NAME:

Choose a name for the file. Let's
assume you call it XXX. Type this:
XXX
and press the RETURN key. The light
on the disk drive will come on, and the
disk drive will whirr as the file is
stored.

Next check to see that things really
worked as reported: turn off the Apple,

turn it on again, then Load your file
XXX and choose the Edit option.

Look though the file. Your sample
typing should be there, a clear sign
that you've successfully created a file
using the Apple Writer. Finally, read
the few paragraphs that follow the
summary.

Here's the summary of commands you'll
need to use to save the file and
return to the editor.

WHAT YOU TYPE: WHAT HAPPENS:

ESC ESC CTRL-Q editor menu displayed

S   USE "TUTORIAL" AS NAME?

N   told "ENTER FILE NAME:"

XXX   drive light comes on,
                "SELECT:" displayed

Turn OFF the Apple, then turn it ON.

L   told "ENTER FILE NAME:"

XXX   drive light comes on,
                "SELECT:" displayed

E   you're at the start of
                the file XXX; read the
                paragraphs after this.

END: Now try saving the file.

The last editor menu option, Quit,
returns you to BASIC. If you stop
using the editor and then want to stop
using your Apple, you can turn it off
instead of using Quit.

The time has come to quit, even though
we've barely scratched the surface of
all the things you can do with this
editor. We haven't discussed the
editor's ability to look for a word or

series of characters and substitute any
other word or series of characters of
your choice in its place. Many other
things await you in your Apple Writer
manual, so type this:
ESC ESC CTRL-Q
to get to the editor menu, then choose
the Quit option, and start reading!

BYE

APPENDIX D: ASCII CHARACTERS

Here is a table showing the characters you type to produce the
characters you want printed.

The following sets of characters don't have an upper case version. They
will be printed the same whether you type them in upper or lower case:

To get this character:	Type this:
space	space
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
:	:
;	;
,	,
-	-
.	.
/	/

To get this character:	Press SHIFT, then:
!	1
"	2
#	3
$	4
%	5
&	6
'	7
(	8
)	9
*	:
+	;
<	,
=	-
>	.
?	/

The following characters DO have an upper case version, which you get by
pressing ESC.

To get this character:	Type this:	To get this character:	Press ESC, then:
a	A	A	A
b	B	B	B
c	C	C	C
d	D	D	D
e	E	E	E
f	F	F	F
g	G	G	G
h	H	H	H
i	I	I	I
j	J	J	J
k	K	K	K
l	L	L	L
m	M	M	M
n	N	N	N
o	O	O	O
p	P	P	P
q	Q	Q	Q
r	R	R	R
s	S	S	S
t	T	T	T
u	U	U	U
v	V	V	V
w	W	W	W
x	X	X	X
y	Y	Y	Y
z	Z	Z	Z
{	CTRL-N	[	CTRL-N
}	shift M	]	SHIFT M
~	shift N	^	SHIFT N
`	shift P	@	SHIFT P

APPENDIX E: NOTES ON PRINTERS

This appendix provides information on connecting the Apple II to various printers and setting the column width for printers that require parallel interface cards (e.g., the Centronics). It also contains a comment about what to do with bit 8.

Before using any interface card, be sure to read its manual.

CONNECTING THE APPLE II

The Apple II works with at least the following printers and cards:

Printer: Card:

CENTRONICS   Centronics printer interface card
                (Apple Product A2B0007)

PRINTRONIX   Parallel interface card
                (see the next section)

QUME   High speed serial interface card
                (Apple Product A2B0005)

Other cards are available; however, you should familiarize yourself with the difficulties and hazards of using them.

PARALLEL PRINTER INTERFACE CARD

Before you use an Apple parallel printer interface card or the Centronics printer interface card, you should read the Parallel Printer Interface Card Installation and Operating Manual (Apple Product A2L0004).

The parallel printer interface card uses 40 columns as the width of a
printed line. If you want to use a printer that will print a line wider
than 40 columns, direct the interface card to use a wider format.
Specify a number that is the number of columns of your widest file. For
example, if the interface card is in slot 1 and you're using a
Centronics printer with a width of 132 columns:

1. Turn on the printer.

2. Turn on the Apple and get it into whatever form of BASIC you want it
to run.

3. Type
PR#1
CTRL-I 132N
PR#0

The maximum width available on a Centronics printer is 132 characters.

4. When you are ready to print your document, use $C102 for the printer
address in PRINT CONSTANTS.

Generally, you will use the sequence

PR#{printer card slot used}
CTRL-I {column width} N
PR#0

to set the column width for the printer. This does not override the
margins set in the print program. The column width is the number you
use for the right margin (e.g., 79), NOT the number of columns you use
(e.g., 79 minus 7).

To set the printer address in PRINT CONSTANTS, use the value $C{N}02
where {N} is the number of the slot that contains the interface card.
Remember that you don't enter the $ when typing the printer address.
For instance, if the card is plugged into slot 1, type
C102
for the printer address.

SERIAL INTERFACE CARD

To use the Apple Writer with a letter-quality printer (such as the Qume
Sprint 5, Diablo, and Spinwriter), check your serial interface card to
be sure it has a P8-02 PROM. If the serial interface card doesn't have
a P8-02 PROM, contact your Apple dealer to get that PROM. The P8-02
PROM allows you to print documents at speeds greater than you could with
a standard serial card.

Be sure to read the serial interface card manual (Apple Product A2L0008)
before attempting to install the PROM or install or use the serial card.

LOADING A DRIVER

If your printer is connected to your Apple through a non-standard
interface card, you'll need to use a driver, which is a program that
allows you to run a printer connected to a non-standard card. To print
a document, you must load the driver by following this procedure:

1. From the print menu, type
CTRL-D

2. Type
BLOAD DRIVERNAME, A$300

3. Return to the print menu by typing
Q RETURN

4. Use $300 as the printer address in print constants.

A COMMENT ON BIT 8

Of the eight bits in a byte, only 7 of them are needed to represent the entire ASCII character set. The ASCII character set is the set of characters available on most printers and many computers, including the Apple II.

Unfortunately, no precise definition exists for the 8th bit. In designing and building computer and printers, some companies use it one way, some completely ignore the first way and use it another way, and others ignore it entirely.

Of those who decided to use it, some of them decided that if bit 8 was set (was a 1), then the printer will print double-spaced lines. Others decided that if bit 8 is 0, the printer will print double-spaced lines. And some of them decided that bit 8 will select a different character set.

Generally, you can set the bit either way. Specifically, read the manual for your printer to determine what will happen to your printer if you set bit 8.

One of the options in PRINT CONSTANTS is
(H) DATA BIT 8 (1)SET, (0)CLEAR = 1.

APPENDIX F: SYSTEM FILES AND PROGRAMS

Here is an annotated list of the files and programs that make up the Apple Writer.

HELLO is the program that starts up the editor program automatically.

APPLESOFT is the HELLO program in integer BASIC.

TEDITOR is the text editor program, described in Chapter 2.

PRINTER is the print program, described in Chapter 3.

PRINT CONSTANTS is the file that stores the specifications used to set the format for a printed page. This is also described in Chapter 3.

TRANSFER FILE is a temporary file used to store the text being moved by CTRL-Y. The file will contain whatever text was last moved by CTRL-Y. This is described in Chapter 2.

APPENDIX G: MAKING A WORKING COPY WITH ONE DISK DRIVE

If you have only one disk drive, use the following procedure to make a working copy of the Apple Writer from the write protected backup diskette.

Remember to press RETURN after typing each command.

1.   Insert the write protected diskette containing the Apple Writer.

2.   Turn on the Apple and boot the system if necessary.

3.   Press Q in response to the editor menu.

4.   If you have an Apple II, type
LOAD APPLESOFT

5.   If you have an Apple II Plus, type
LOAD HELLO

6.   Remove the write protected diskette and insert a blank diskette.

7.   Type
INIT HELLO
The disk will hum and whirr for about two minutes. The blank diskette is now initialized.

8.   Type
LOCK HELLO

9.   Remove the initialized diskette and insert the write protected diskette.

10.   Type
BLOAD TEDITOR

11.   Remove the write protected diskette and insert the initialized diskette.

12.   Type
BSAVE TEDITOR,A$803,L$1040

13.   Type
LOCK TEDITOR

14.   Remove the initialized diskette and insert the write protected diskette.

15.   Type
BLOAD PRINTER

16. Remove the write protected diskette and insert the initialized diskette.

17. Type
BSAVE PRINTER,A$803,L$1040

18. Type
LOCK PRINTER

19. Remove the initialized diskette and insert the write protected diskette.

20. Type
BLOAD PRINT CONSTANTS

21. Remove the write protected diskette and insert the initialized diskette.

22. Type
BSAVE PRINT CONSTANTS,A$50,L$F

23. Remove the initialized diskette and insert the write protected diskette.

24. Type
BLOAD TRANSFER FILE

25. Remove the write protected diskette and insert the initialized diskette.

26. Type
BSAVE TRANSFER FILE,A$200,L$200

27. Remove the initialized diskette and insert the write protected diskette.

28. Type
RUN HELLO

29. Press L in response to the editor menu.

30. Type
TUTORIAL
in response to the request for file name.

31. Remove the write protected diskette and insert the initialized diskette.

32. Type S, then Y in response to the menu and the file name prompt to save TUTORIAL.

Your working copy of the Apple Writer is now complete. Be sure to put away the write protected copy in a safe place.

INDEX

F

files: see text files
  Apple Writer 65
format
  common errors 50
  embedded print command 40-41
  specifications for printing 36
free memory (CTRL-F) 22

G

H

hardware mysteries (printing) 49
heading for printed page 38
helpful hints 50-52

I

I key (cursor control) 12
inserting a file (CTRL-I) 24
inserting text 13

J

J key (cursor control) 12
justify modes 42-44
  center 43
  left 42
  right 43

K

K key (cursor control) 12

L

(L) LOAD FROM DISK 8
(L) LOAD FILE FROM DISK 34
left arrow (←) 16, 46
left margin 36, 42
lines per page 36
loading files 8
loading a driver (printer) 63
loop: see loop

M

M key (cursor control) 12
marker (defined) 23
margins 36
  changing 40-41
  setting 36
menu
  editor 4, 7
  print 33
  print constants 35
modes 10-15
  case change 15
  cursor control 12
  text 11
  upper case 14
monitor prompt (*) 4, 31
moving a block of text:
  (CTRL-Y) 29-31

N

(N) INITIALIZE NEW FILE 7

O

P

(P) PRINT FILE 8
(P) PRINT NEW DOCUMENT 34
page heading 38
page numbers 37
paragraph deletion (CTRL-X) 18
parallel printer interface card 61-62
pop (CTRL-P) 25
print constants 35
print menu 33
print new document 34
print program 33
printer address 37
printer commands
  (text-embedded) 40-41
printer controller cards 61-63
  Centronics 61
  parallel interface 61-62
  serial interface 63
printers 61-64
  Centronics 61-62
  Printronix 61
  Qume 61
printing problems 49-50
programs
  Apple Writer 65
  editor 2   .
  print 33

Q

(Q) QUIT 8, 39
Qume 61

R

(R) RETURN TO EDITOR 39
replacing (CTRL-R) 26-29
  automatic 28
  manual 27

REPT key (REPeaT) 3, 12, 16
RESET 31, 12
restarting
  with Autostart ROM 4
  with old monitor ROM 4
retrieving characters (→) 16, 17
RETURN 3, 11
right arrow (→) 16, 17, 46
right margin 36, 42

S

(S) SAVE TO DISK 8
saving a text file 9
saving a file segment
  (CTRL-K) 22-23
searching (CTRL-S) 25-29
  and replacing 26
serial interface card 63
SHIFT key 14
single page (printing) 36
slots (disk controller) 10
spaces between lines 36, 42
speeding up editing 51
starting
  Apple Writer 3-4
  editor program 4
  print program 33
  printer 38
stopping the printer 39
storage buffer 16
string (defined) 17
  search and replacement 17
summary of commands
  editor 46
  print 39
  text-embedded 41-42
system files 65

T

TEDITOR 65
text-embedded printer commands 40-41
text file
  hints for preservation 50
  inserting into another file 24
  loading from a diskette 8

names 9
    saving on a diskette 9
    starting a new 7
text mode 11
top margin 36, 42
TRANSFER FILE 30, 65
Tutorial
    how to run 5
    text of the 53-58

U

unprinted comments 45
upper case
    characters 14, 60
    mode 14

V

W

word deletion (CTRL-W) 16, 17,
    18-19, 47
wrap around 11

X

Y

Z

EDITING

COMMAND:		EFFECT:
ESC		upper case mode
ESC ESC		cursor control mode
ESC ESC CTRL-C		case change mode
ESC		return to cursor control mode from case change mode
ESC ESC CTRL-Q		return to editor menu
<-		delete a character
->		retrieve a character
I		up one line
M		down one line
J		left one character
K		right one character

COMMAND:	MNEMONIC:	EFFECT:
CTRL-T:	Top	cursor up 12 lines
CTRL-V:	Vertical	cursor down 12 lines
CTRL-B:	Beginning	cursor to beginning
CTRL-E:	End	cursor to end
CTRL-D:	DOS	access to disk
CTRL-F:	Free	check free memory
CTRL-I:	Insert	insert file from disk
CTRL-K:	Keep	save file segment to disk
CTRL-P:	Pop	clicks over return
CTRL-S:	Search	starts search and replace
CTRL-R:	Replace	replace specified string
CTRL-W:	Word	deletes a word
CTRL-X:	X-out	deletes a line or paragraph (<256 characters) from cursor
CTRL-Y:	Yank	moves block within file

PRINTING

These commands must be preceded and followed by a RETURN. Type them using lower case letters.

COMMAND:	SETS:
!fj	Fill justify mode
!lj	Left justify mode
!cj	Center justify mode
!rj	Right justify mode
!np	A new page
!lm{number}	Left margin to column {number}
!rm{number}	Right margin to column {number}
!tm{number}	Top margin
!bm{number}	Bottom margin
!sp{number}	Number of spaces between lines